

DMD Student Oral Presentations (Samson 176):

Nolan Kranc, Class of 2027

Mentor: Dr. Faisal Quereshy, Oral and Maxillofacial Surgery

Large Language Models in Oral Surgery Training: Preliminary Survey Results

We surveyed current OMFS residents across the United States in order to determine the frequency and types of usage of large language models (ie. OpenAI) during residency training. Overall, the survey results provides evidence that large language models are a commonly used learning tool for OMFS residents and that programs should consider formal large language model instruction.

Claire Campbell, Class of 2027

Mentor: Dr. T. Roma Jasinevicius, Comprehensive Care

Diabetes Testing in Ohio Dental Offices

A short anonymous survey (Qualtrics) was administered to Ohio Dental Board-registered general dentists (GD) and periodontists, receiving 150 responses. Survey items included demographics and familiarity/comfort with BGT modalities, frequency of diabetes-related referrals, opinions on the strengths/challenges to BGT implementation, and interest in implementing BGT in their own offices. Despite limited response rate, Ohio dentists appear willing to implement in-office BGT; however, hindrances include knowledge levels and resources. Future studies should focus on training in dental schools and continuing education.

Alex Matthews, Class of 2027

Mentor: Dr. Sena Narendran, Community Dentistry

Dental Hygienists' Awareness and Support for Emerging Oral Health Personnel

This study examined 503 dental hygienists' levels of awareness and support for emerging dental health workforce roles intended to improve access to dental care. Specifically, these included the roles of Advanced Dental Hygiene Practitioner, Community Dental Health Coordinator, and Dental Therapist. Respondents reported low levels of awareness but relatively high levels of support for each of these roles.

Caroline Deyoe, Class of 2026

Mentor: Dr. Keith Schneider, Oral and Maxillofacial Surgery

Development of Elaborate 3-D Printed Training Skulls for Local Anesthesia Instruction: Highlighting Angle's Classifications of Malocclusion

Trouble exists with dental students understanding variations in patient anatomy and current teaching methods are incomplete. Research confirms the variance in mandibular foramen position. Collaboration with the Sears think[box], the CWRU Oral and Maxillofacial Radiology Department and the CWRU Oral and Maxillofacial Surgery Department to address the teaching void.

Hounein Arbaji, Class of 2025

Mentor: Dr. Andre Mickel, Endodontics

Comparative Effectiveness of Endodontist vs AI Software in the Detection of Periapical Lesions: A Retrospective Study

This study evaluates the effectiveness of Adravisio AI, a convolutional neural network-based artificial intelligence, in detecting periapical lesions on periapical radiographs compared to endodontists, using Cone Beam Computed Tomography (CBCT) as the gold standard. The results indicate that Adravisio AI outperforms human evaluators in sensitivity, specificity, and overall accuracy, highlighting its potential as a reliable tool in dental diagnostics to enhance patient care outcomes.

Ryan Liu, Class of 2027

Mentor: Dr. Mark Hans, Orthodontics

Comparing The Outcome of Orthodontic Treatment With The Invisalign Aligner System to Custom-made In-office Aligners

We reviewed 12 patients in private orthodontic offices to compare Invisalign® treatment outcomes to custom aligners made in-office by orthodontists using the two accepted methods to assess before and after treatment dental alignment. Based on this limited data, we can see that both INV and CA made similar improvements in dental alignments.

DMD Student Poster Presentations (Samson South Winter Garden)

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Mohammad Hadeed, Class of 2025

Mentor: Dr. Faisal Quereshey, Oral and Maxillofacial Surgery

Case Reviews: Ameloblastoma

Ameloblastoma is a rare, benign but locally aggressive tumor that originates from the epithelial cells involved in tooth development. This poster will go over the clinical presentation, treatment, and follow-up of Ameloblastoma and recent cases.

Nolan Kranc, Class of 2027

Mentor: Dr. Dale Baur and Dr. Faisal Quereshey, Oral and Maxillofacial Surgery

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Mentor: Dr. Sena Narendran, Community Dentistry

Dental Care Access for Children and Youth with Special Healthcare Needs in Ohio

This study investigated Ohio general dentists' perspectives about dental care access for children and youth with special health care needs (CYSHCN). Respondents reported insufficient training regarding CYSHCN and a pressing need for additional training opportunities. Willingness to treat CYSHCN and public insurance acceptance also varied significantly based on various professional characteristics.

Dylan Sosnoswsky, Class of 2027

Mentor: Dr. Catherine Demko, Community Dentistry

Survey of Ohio Dentists Regarding Teledentistry

We surveyed licensed Ohio dentists to assess their experiences, perceptions, and challenges regarding teledentistry. While 50% of respondents had never used teledentistry, users reported benefits such as convenience and improved access to care. However, concerns about reimbursement, data security, and perceived limitations in clinical quality remain barriers to broader adoption.

Vivian Wan, Class of 2027

Mentor: Dr. Pushpa Pandiyan, Biological Sciences

Immunofluorescence Staining to Detect Specialized Tumor Modulating Cells in Oral Cancers

We performed preliminary research to detect specialized tumor modulating cells in oral cancers, and explore the roles that T-regulatory cells and Schwann cells play in the process of perineural invasion during oral cancer development. This project aimed to identify FOXP3 markers in T-regulatory cells and S-100 β markers in Schwann cells present in oral cancer samples from animal sources, and then compared them to a negative control group to identify differences. Overall, the presence of S-100 β and FOXP3+ cells were observed in tumor tissues from patients, but more samples are necessary for further investigation.

Fabian Wong, Class of 2026

Mentor: Dr. Faisal Quereshy and Dr. Dale Baur, Oral and Maxillofacial Surgery

Case Review: Management of Osteomyelitis of the Jaw

Osteomyelitis of the jaw is a severe inflammatory condition caused by an infection of the medullary bone, which can progress to cortical bone destruction, sequestration, and potential necrosis. Effective management requires a comprehensive approach, emphasizing early diagnosis, antibiotic therapy, and timely surgical intervention. This case review examines the pathophysiology, clinical presentation, radiographic features, and treatment strategies for this condition.

Graduate Student Poster Presentations (Samson South Winter Garden)

Sarah Almoemen, OMFS, Class of 2027***TMJ replacement surgery in patients with Ehlers-Danlos Syndrome***

Ehlers Danlos Syndrome (EDS) is a connective tissue disorder caused by mutations in collagen. This leads to hypermobility, tissue fragility and joint instability. The purpose of the case report is to discuss the temporomandibular joint manifestations of EDS and provide a detailed journey of a patient's treatments to address chronic and recurrent TMJ dislocation.

Miguel Ascencio, Endodontics, Class of 2026***Evidence-Based Pain Management***

Overview of what evidence based care is, evaluating clinical performance, pain control and measurement of pain, functional measures, and patient satisfaction.

Beverly Balasuriya, Olujare-Abiola Lawal, Humza Syed, and Lauryn Taylor, AEGD, Class of 2025***To Crown or Not to Crown***

We looked at multiple studies regarding the success rate of different final restorations for root canal treated posterior teeth. We found that crowning molars is almost always the best option, but depending on adjacent teeth, restoring root canal treated premolars with composite can be just as successful.

Kayla Beever, Endodontics, Class of 2026***ROOTING FOR SUCCESS: Navigating the Path to Diagnosis***

Overview of Diagnostic Process: 1) Comprehensive History 2) Psychosocial History
3) Comprehensive Clinical Exam 4) Definitive Diagnosis & Treatment Plan

Carolina Gerges, Endodontics, Class of 2025

Management of Persistent Orofacial Pain

Treatment Options Within the Scope of General Dentistry: occlusal appliances, occlusal equilibration, thermal packs, medications with anti-inflammatory or muscle-relaxant properties, relaxation/stress management training, diet counseling.

Laurel Leavitt, Endodontics, Class of 2026

ACHY BREAKY JAW: Management of Masticatory Myalgia and Arthralgia

This presentation will discuss the most common disorders that can cause Masticatory Myalgia and Arthralgia. Moreover, it will address the management of those conditions.

Stefanos Matthaïos, Craniofacial Orthodontics, Class of 2025

Three-Dimensional Maxillary and Nasal Airway Changes associated with Hybrid Hyrax and MSE

We conducted a comparative study on skeletal, dental, and nasal airway changes in patients treated with two types of mini-implant-assisted palatal expanders: the MSE (4 mini-implants) and the Hybrid Hyrax (HH, 2 mini-implants), using CBCT and AI-assisted segmentation of the maxilla, maxillary canines, and first molars. Our findings indicate that both appliances were equally effective in achieving dental and skeletal expansion and increasing the nasal airway volume and minimum constriction area. Therefore, both treatment options are suitable for maxillary expansion in adolescents and young adults.

Sean Noohpishah, Endodontics, Class of 2026

Enchanted Capsules: Banishing Pain in Endodontics

My poster presentation explores the role of oral medications in managing endodontic pain, emphasizing the superiority of nonsteroidal anti-inflammatory drugs (NSAIDs). Research shows that NSAIDs effectively reduce inflammation and pain by inhibiting cyclooxygenase enzymes, offering greater relief than opioids or acetaminophen with fewer side effects. This presentation highlights clinical evidence supporting NSAIDs as the first-line choice for endodontic pain management.

Marvin Payen, Endodontics, Class of 2025

From Discomfort to Relief: Management of Mucosal Pain

This presentation will address the diagnosis and management of oral mucosal pain.

Johnny Pham, Endodontics, Class of 2025

Pain in the Brain: Management of Neuropathic Pain in Endodontics

We discuss the different types of neurogenic pain and the available drugs that could be used for treatment. Many different drugs have a variety of evidence of benefits but there are also corresponding side effects to note.

Seth Pinosky, OMFS, Class of 2027*Clinical outcome measures in the management of odontogenic keratocystic lesions*

We reviewed various studies of odontogenic keratocysts (OKCs) to evaluate recurrence rates based on treatment approach. Our analysis showed that enucleation with adjunctive therapy such as 5-FU and Carnoy's solution resulted in lower recurrence compared to marsupialization or enucleation alone. This review covers multiple treatment modalities and compares recurrence rates.

Elysha Pomerantz, Periodontics, Class of 2025*Preliminary Data on Immediate vs Delayed Loading of Four Guided Implants Supporting a Maxillary Overdenture with a Novaloc Retention System: A Randomized Controlled Study*

Technological advancements have resulted in modern dental implant protocols that provide the possibility to immediately load implants, with the advantage of reducing the length of treatment time and satisfying patient demands. The purpose of the study is to evaluate the radiographic, clinical, and patient-centered outcomes of implant-retained immediately-loaded maxillary complete dentures in comparison to delayed loading approach.

Saja Said, Pediatric Dentistry, Class of 2025*Dental Manifestations of Kabuki Syndrome: A Case Report*

Kabuki syndrome is a congenital multi-system disorder caused by mutations in the KMT2D and KDM6A genes. Oral manifestations reported in patients with Kabuki Syndrome include hypodontia, malocclusion, high-arched palate, delayed tooth eruption, small dental arches, and microdontia. This report will outline the clinical and radiographic dental abnormalities associated with a case of Kabuki syndrome and discuss the immediate treatment rendered to the patient as well as future treatment goals.

Lana Shoukair, Endodontics, Class of 2025*From Pains to Gains: Managing Dental Pain in Endodontics*

Proper diagnosis and treatment in endodontics are crucial for effectively alleviating patients' pain. The poster highlights key signs, symptoms, radiographic findings, and clinical testing results that aid in accurate diagnosis. Also emphasized are the appropriate emergency and definitive treatment protocols once a correct diagnosis is established. Additionally, other possible sources of dental pain are discussed such as atypical odontalgia, neuralgias, cracked tooth syndrome, and vertical root fracture.

Ewing Threet, Endodontics, Class of 2025*Lost in Translation*

This poster will address the problems of science transfer in orofacial pain and solutions.